FORMAT

FOR SPECTRUM AND SAM USERS

HMM, 4 DOWN...
"USE STRANGE FAT ROM
TO RESHAPE DISC."

F SOMETHING,
R SOMETHING,
T!

DAILY PLANET

-JON-
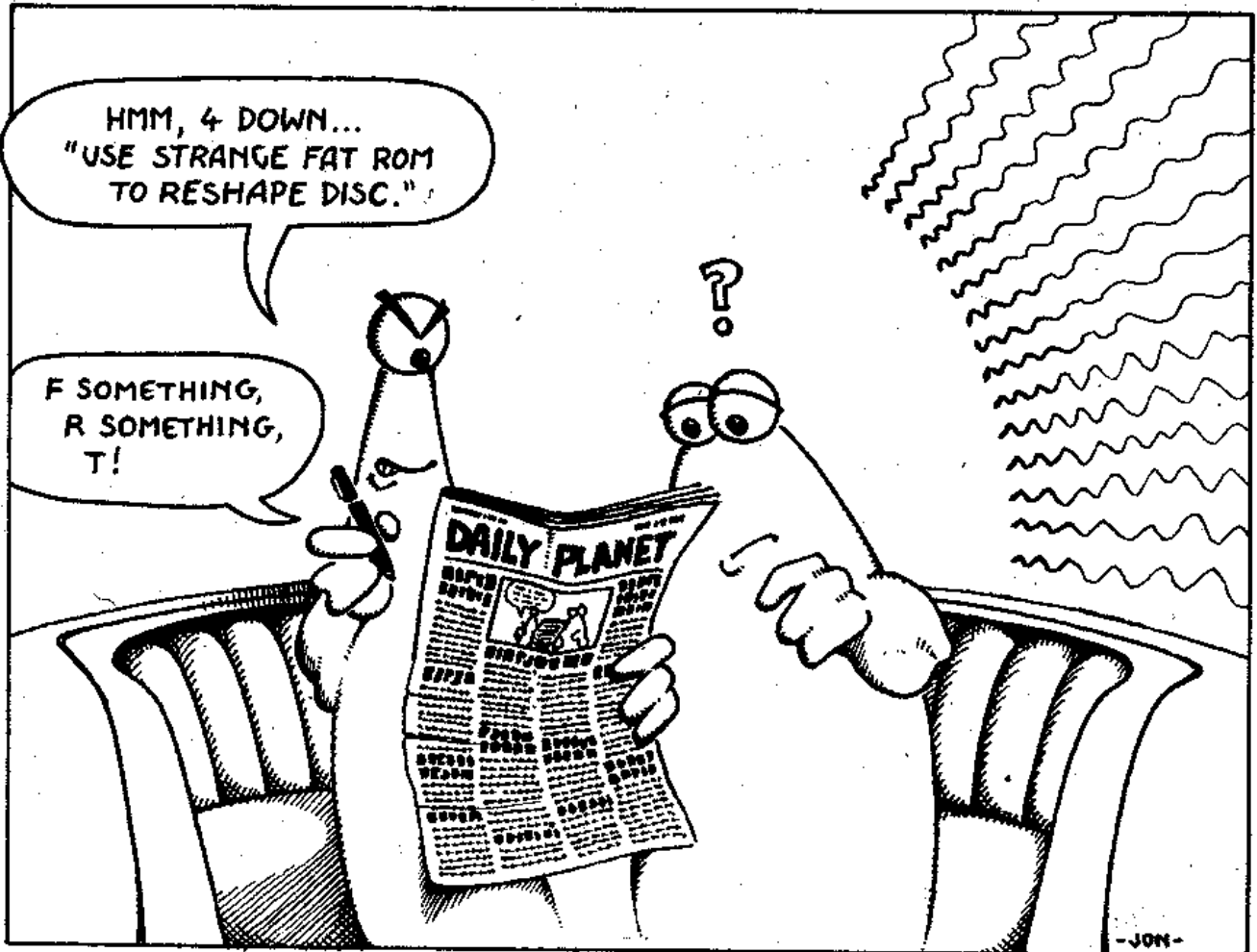
IF YOU NEED A CLUE
YOU NEED FORMAT

UNIDOS The incredible new DOS from Steve Warr for the PLUS D and DISCiPLE. Random files. Sub directories. Hundreds of files on one disk. Hidden files. Protected files. Copy any file of any length without reseting. Openfiles on both drives at the same time. Read&write the same file via different channels at the same time. Redirect stream 3 to disk. Incredibly versatile screen dump routines will print any part of the screen any size you want. Error trapping that works. Be able to add new functions and commands. Many more features. **State if PLUS D or DISCiPLE, disk size and number of tracks required when ordering. (PLUS D, 3.5 inch 80T will be sent otherwise)**

Disc Backup Utility An easy to use program that will copy any type of file and of any size. Allows file names to be changed during copy and wild characters in both source and destination file names. Also has archive features and automatic overwrite of duplicate files. Worth buying just to copy your snapshots! Cassette for both DISCiPLE & PLUS D

File converter Many programs on the DISCiPLE & PLUS D create MD Files. (eg OCP assembler) File converter will change them into ordinary files (and back again if you wish) to allow your own programs to access them. Cassette for both DISCiPLE & PLUS D

Hackers Workbench still the most versatile snapshot hacker available for the experienced programmer. Cassette for both DISCiPLE & PLUS D.

Incremental Backup Utility. Now completly re-written. Make exact copies of your disks with IBU. Only the files that have been added or changed will be copied. Cassette for both DISCiPLE & PLUS D

SAMIBU. Copy a full 780K disk with only 4 disk swaps on a 512K SAM. And even more amazing for the same price as IBU but supplied on 3.5" disk.

SPECMAKER A realy useful Spectrum emulator for your SAM. All the extra SAM keys work in Spectrum mode. Automatically uses SAMs printer port and allows up to 360K of Spectrum programs to be held in SAM memory as a RAM DISK. Programs do NOT have to be changed to make use of the RAMDISK, SPECMAKER does it for you by changing the Spectrum ROM code. Can use Spectrum, microdrive or PLUS D SAVE/LOAD syntax. Many programs that only use cassette are now far more useful as they will work with RAMDISK. PLUS D disks can be loaded into the RAMDISK and saved to SAM disk. Includes the RDUTIL utility to allow peek and poke of any file in the RAMDISK. Supplied on 3.5" disk

Now available version 2.8 Many of the requested features have been added such as loading from drive 2, Returning to Spectrum mode without clearing the RAMDISK etc. **V2.8 can even read dual density OPUS disks on your SAM.**

SPECMAKER is constantly being improved and is the simplest Spectrum emulator for SAM. 1000s of programs work without the need for any conversion. Most other programs need only minor changes.

CONTENTS

SAM SHOP OPENS

Sam Computers Ltd have now opened their own retail outlet at their Swansea Enterprise Park HQ. The shop, open to the public from 9am to 5.30pm, Monday to Saturday, is a dream come true for SAM owners as it stocks all the latest and best software and hardware for the SAM Coupé. SAMCO can be contacted on Swansea 700300.
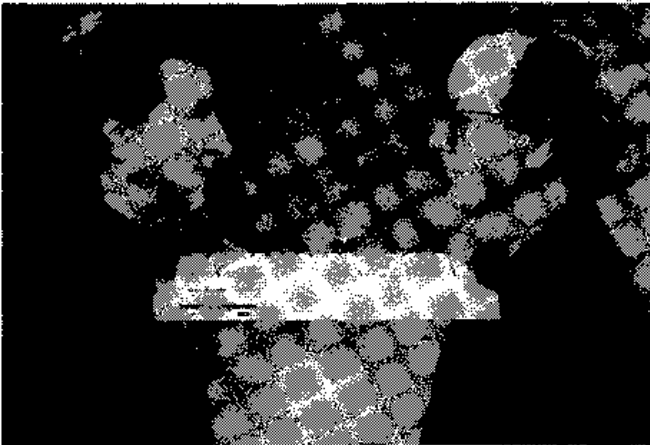
Alan Miles (left) and Bruce Gordon with SAM (the handsome one in the middle).

SAM EXTENDED BASIC

Dr.Andy Wright is now working on an Extended Basic Package for the SAM Coupé. Several of his Beta Basic commands that had to be left out of the original SAM ROM due to lack of space will be included along with many totally new commands and functions.

The new basic extensions will load from disc and become part of the system, giving you new keywords and extending the functions of several existing ones - like CSIZE which will now work to produce characters upto full screen size.

Andy has also said he is looking for more ideas for the new basic so if there is a command you have always wanted in basic why not drop us a line and we will pass things on. SAM Basic was always designed to be extended in this way and there may well be an extended-extended basic if the demand is there.

The first version of the new basic will be previewed at the next All Formats Show, but no date has been set as yet for it's release.

P.B.T. COLOUR PACKAGE

P.B.T. Electronics have taken over the excellent colour dump utility written for the SAM Coupé by Darren Talbot. Now a much enhanced, user friendly, version the utility will be available for £8.99 on 3.5" disc.

At the same time P.B.T. has started shipping the recently reduced Citizen Swift 9 and Swift 24 colour printers. The Swift 9 now costs £195.50 with the 24 pin Swift 24 coming in at a fantastic £299.50. Both printers will be shipped with a FREE copy of the colour dump utility to SAM owners who order the dump at the same time as their printer.

MORE FOR SAM

Far from slowing down as Spring approaches the SAM market is realy hotting up with lots of new release. Apart from the Extended Basic (see above) lots of new software and hardware have been announced.

Sam Computers have released the new Sam Midi Sequencer package for £29.95. It does most of things that expensive ST and Amiga sequencers do PLUS a few things new to itself. Sam Computers have also released Quiz Ball and Highway Code, both at £9.99.

Blue Alpha Electronics have finished their Sound Sampler, a hardware interface (complete with microphone) which enables you to sample sounds from almost any source. You can then replay them at diffent speed and edit them to produce advanced sound effects. The unit is priced at £49.95 (but see their special offer in this issue) and comes with all necessary software.

Several new arcade games, including F16 Fighter Pilot, are due to appear soon and many more companies are now

developing titles for SAM.

Alan Miles reports continued enlargement in the dealer base which can only be good for all SAM users (if your local dealer is not stocking SAM or its softwarw then why not have a word in their ear).

Alan also reports a steady growth in the educational field following the pionering efferts of Teachers Pet and Leo Software. This is seen, by SAMCO, as one of the largest potential growth areas for SAM in the next year or two.

NEW MAGAZINE LAUNCH

They say that imitation is the sincerest form of flattery, so FORMAT must now consider itself flattered. After four years as the only serious magazine for Spectrum (and later SAM) users we are now to have a rival.

Sinclair & Sam Computing will cover the Spectrum, QL and Z88 markets. It will cost £1.75 an issue and will be avalable by post from Garner Designs of Dunstable. The magazine takes over from the +3 user group which Garner Designs are now now closing down following the demise of the +3 first reported in FORMAT many moons ago.

We wish our new rival well, it goes to show that the Spectrum and SAM Coupé scene is not as dead as the 16 bit pundits would have people believe.

DEALER SUPPORT FROM FORMAT.

A new Dealer Support Scheme is being launched by FORMAT this month aimed at helping dealers to provide a more knowledgeable service to customers who want to go beyond using their computer for games playing.

Registered dealers will have access to our technical hotline, receive advanced copies of FORMAT, and be able to sell FORMAT/INDUG subscriptions direct to their customers.

Dealers wishing to register should write to us requesting full details.

URGENT we need your news. New Releases, Club meets, Shows, anything you think other people should know about. If you have any news items you want to pass on then send them in. Please mark the envelope NEWS in the top corner.

April already, the year is just flying by, and yet another issue of FORMAT is nearing completion. And what a packed issue it is.

This month sees the welcome return of The Adventure Corner and Thought Spot. Both have been missing for a few months partly due to the staff problems here and also due to postal mishaps around Christmas. Still, what is past is past and it is good to have two old favourites back.

We also welcome what I trust will become a new favourite with SAM readers. Brent Stevens, head of the new SAM Coupé Public Domain Software Association, has agreed to produce a monthly column for FORMAT giving mini reviews of new PD titles as they become available. A special discounted subscription to the quarterly SCPDSA catalogue is available to INDUG members who use the form provided in this issue (remember to quote your membership number).

All you Spectrum owners out there, pay attention please, this bit is aimed at you. I've been getting complaints (and I don't like complaints) about the lack of Spectrum stuff in FORMAT. Well, OK I get complaints from SAM owners of too much Spectrum stuff so I know I can't win. But the reason for the shortage of Spectrum is you are not sending things in. Come on, remember many people have only had their machine 2 or 3 years so much that was published in the helcion days of '83-84 has been missed. Just because you know something don't take it for granted everyone does. Get out the old wordprosesssor and jot a few things down. Pass it on, make people happy and get your name in print.

On the subject of the Spectrum. A long time ago I was one of the first to hint that Amstrad were dropping the old CPC range of computers. Later I correctly predicted the death of the +3. Well my crystal ball has been working hard again and this time it looks like the +2a may be on its way out. Yes the last version of the Spectrum could be no more by the end of this year. Amstrad are concentrating on the new CPC range for the games market and as Suger never considered the Spectrum anything other than a games machine (even though we know better) the +2a is now looking overpriced and due for the chop. It will be sad to see the end when it comes but with so many Spectrums around it will be many, many years before support dries up. FORMAT at least will, I hope, be around to welcome in the new century come 2001.

Now on to something a little lighter, anyone out there got any old software, hardware or books they dont want? Well someone has sugested we organize some form of an exchange system for readers. Perhaps with one person responsible for keeping a list of what is available. I would welcome any ideas readers might have as to how this could be run. I leave the concept in your hands.

Next month will see the start of our Summer'91 membership drive. Full details will be printed next month but to wet your appetite I will tell you that this year charity will be the major beneficiary, although there is a LIFE TIME SUBSCRIPTION for some luck person as well.

Until next time.

Bob Brenchley. Editor.

By:- John Wase.

Let's kick off this month with the first offering I've had for "UNI-DOS" (the new operating ROM for the DISCiPLE/PLUS D from SD Software). This comes from Malcolm Perry of Kidderminster, a constant source of useful contributions. Malcolm provides a UNI-DOS compatible program to recover erased files - short, no frills, no error-trapping, especially for "Short Spot" (Bless you, Malcolm), the user to expand and modify as required.

It works on root directories, sub-directories, sub-sub-directories, etc., etc....

```
 10 INPUT "DIRECTORY ";A$: CLEAR #: O
    PEN #4; D1;A$RND
 20 INPUT "FILE NO. ";S
 30 POINT #4; S*256-255: LET F$=(IN #
    4,11)
 40 IF CODE F$(1)=0 THEN GOSUB 100
 50 CLS: PRINT AT 10,8;F$(2 TO );"NOT
    ERASED FILE": CLEAR #: STOP
 60 STOP
100 CLS: PRINT AT 10,5;F$(2 TO );"-ER
    ASED FILE": CLEAR #: STOP
110 INPUT "FILE TYPE CODE ";C: POINT
    #4;S*256-255
120 PRINT #4; CHR$ C;: OUT #4: CLEAR
    #: CAT 1: STOP
```

To exit when there is an erased file that you don't want to recover, merely enter zero. Many thanks, Malcolm.

Having trouble reading the telly? Poor old Speccy's got dot crawl? Mr Baumann (a regular correspondent) of Cowies Hill, Pinetown, S. Africa, to the rescue with his "Alpha Characters" program, which creates a remarkably bold and clear set of characters using a short piece of machine code. Type in the program. The Demo will show all the characters, repeating them in different densities and impacts, and also different paper colours. After you've run the Demo, try changing line 30 by inserting different numbers between 1 and 9 so that you can find the screen print that best suits your television and chosen paper and ink colours. When you are satisfied, save the code as "supa chars" CODE 65518,18. The final code sits above RAMTOP, safe from corruption, and can be merged into a program and called with RANDOMIZE USR 65522. Mr Baumannn writes that he is very impressed with the results; indeed, he is surprised that it has not been published before.

```
 10 FOR n=65518 TO 65535: READ d: POK
    E n,d: NEXT n
 20 DATA 37,141,1,1,201,22,1,1,65,80,
    82,73,76,32,70,79,79,76
 30 LET density=1: LET impact=1: POKE
    65519,density: POKE 65520,impact
 40 REM Demo of all chars
 50 RANDOMIZE USR 65522
 60 LET a$=""
 70 FOR n=65523 TO 65535
 80 LET a$=a$+CHR$ PEEK n: NEXT n
 90 LET k=USR 65522: PRINT a$
100 LET density=density + PEEK 65520:
    POKE 65524,density
110 LET impact=impact + PEEK 65521: P
    OKE 65525,impact
120 PAPER ((PEEK 65524)+1)/5+3 130 GO
    TO 50
```

Mattias Danielson of Dalsjofors, Sweden, writes back to say that the flicker in his vector program (FORMAT Feb 91) was essentially due to a bug: changing PALETTE 7,127 to PALETTE in line 2 cures the problem. He sent me also a much quicker version, but it seems to hold a$ as a variable, without first defining it, so you'll have to include parts of his original as well. Here is his rapid-fire job....

```
 10 REM demo
 20
 30 SCREEN 1: MODE 4: CLOSE SCREEN 2
```

```
   : OPEN SCREEN 2,4
40 SCREEN 1: CLS : SCREEN 2: CLS :
   DO : FOR f= 1 TO 126-(10 AND s=5
   ) STEP s
50 BLITZ a$(f)
60 IF f MOD 2=0 THEN DISPLAY 1: SCR
   EEN 2:clr: ELSE DISPLAY 2: SCREE
   N 1:clr
70 LET f1=f: NEXT f: LOOP
80 DEF PROC clr: INVERSE 1: BLITZ a
   $(f1): INVERSE 0: END PROC
```

Incidentally, Mattias also wrote indignantly that his other program (in the same issue DID generate a fractal (I'd cast some doubts). So did Alan Cox of St. Clears, Dyfed, Wales. Er, yes, boys; it did... My boob; I apologise. Alan also mentions that after he bought his second Spectrum (a 128), he came across an article by Toni Baker in ZX Computing Monthly (December 1986) which made use of the ability of the 128 to draw its screen from two separate areas of RAM to do roughly what Mattias does - display one screen whilst drawing on the other, then switch them. On buying his Coupe, Alan resolved to look at that article again, and my comments have goaded him into producing the following program. Essentially, this is similar to Mattias' job, though Alan's not attempted to incorporate differing sizes or viewpoints, but there is a rather interesting feature; the use of KEYIN. The obvious way to go about this job is to draw all the separate frames first, then RECORD TO and BLITZ a series of pictures stored in an array A$(I). However, try as he may, he can't get SAM to accept RECORD TO A$(I). The use of KEYIN as in line 50, coupled with the definition in line 20 gets round this - up to a point. The snag is that Alan can't, without a lot more trouble, do the obvious next step further to reduce the jerkiness, and draw 48 initial pictures (Toni Baker's original used only 12, so Alan's doubled up - very easy, since RECORD TO is very economical - LEN A$ is only 180). Alan asks if I've any good ideas, but I'm devoid of these (it's a bad month). If anyone out there thinks they can provide a clue or two let me know.

Here's Alan's program.

```
 10 SCREEN 1: CLOSE SCREEN 2: OPEN S
    CREEN 2,4
 20 LET Z$="A$B$C$D$E$F$G$H$I$J$K$L$
    M$N$O$P$Q$R$S$T$U$V$W$X$Y$Z$"
 30 DIM X(12),Y(12)
 40 LET X(1)=128,Y(1)L168,X(7)=128,Y
    (7)=8
 50 FOR I=0 TO 23
 60 FOR J=2 TO 6
 70 LET ANGLE=PI*(72*J+3*I)/180
 80 LET X(J)=128+80*COS ANGLE
 90 LET Y(J)=120+40*SIN ANGLE
100 LET X(J+6)=256-X(J)
110 LET Y(J+6)=176-Y(J)
120 NEXT J
130 RESTORE 300
140 CLS
150 KEYIN "160 RECORD TO "+Z$(2*I+1
    TO 2*I+2)
160 REM BLANK FOR KEYIN
170 FOR J=1 TO 15
180 READ A,B
190 PLOT X(A),Y(A)
200 DRAW TO X(B),Y(B)
210 LET A=A+6
220 IF A>12 THEN LET A=A-12
230 LET B=B+6
240 IF B>12 THEN LET B=B-12
250 PLOT X(A),Y(A)
260 DRAW TO X(B),Y(B)
270 NEXT J
280 RECORD STOP
290 NEXT I
300 DATA 1,8,1,9,1,10,1,11,1,12
310 DATA 2,4,4,6,6,3,3,5,5,2
320 DATA 2,12,3,8,4,9,5,10,6,11
330 FOR I=0 TO 22 STEP 2
340 KEYIN "360 BLITZ "+Z$(2*I+1 TO 2
    *I+2)
350 SCREEN 2: CLS
360 REM BLANK FOR KEYIN
370 DISPLAY 2
380 KEYIN "400 BLITZ "+Z$(2*I+3 TO 2
    *I+4)
390 SCREEN 1: CLS
400 REM BLANK FOR KEYIN
410 DISPLAY 1
420 NEXT I
430 GOTO 330
```

Incidentally, Alan, like Malcolm and nearly everyone else this month has sent me a listing instead of a disc. O.K., I know there is the danger of things omitted on a disc (like I can't find a$ in Mattias' program because

he's saved it in the variables area), but it gives me two main problems. Firstly, it needs typing in. Now, do I type it into my word processor, as text, ready for the column, or do I test it first. That means changing machines, typing it into the SAM and saving it. Either way round, it's a pretty slow process - about a quarter the speed of typing text on the processor or even slower on SAM. And the one commodity I'm short on is time. And transcription invariably causes errors. Come on, folk, it really isn't going to break you, sending me a disc - if Mattias can do it all the way from Sweden, you can do it from Watford, Rhosllanerchrugog or Stirling. Dammitt, they're only 30p. ("What", I hear you cry! Yes, that was what they were charging at the last All Formats Fair. The next one this issue will catch is on 21st April at the National Motorcycle Museum, the NEC [J6; M42] - see you there). The ideal is to send a disc with a bit of scribbled explanation of what it does, so I can load it straight in and play, write something, and copy the program: Bob then converts it direct to ASCII, and there's no chance of error. O.K.?

Lots more short spots on the SAM, nothing else arrived for the Spectrum this month. No-one found any Speccy-spots this month? Can't print them if I haven't got them - come on Spectrum owners, get you fingers out.

Poor Geoff Bridges of Headington, Oxford, uses an IBM compatible printer - a TANDY DMP 132 in IBM emulation mode, to be exact. Like other users of SAM with non-Epson compatibles, he finds text O.K., FLASH pics or DUMP aren't. For DUMP, load the code and enter the following as a direct command.

POKE SVAR 22,7,27,88,8,65,27,51,24,0,4 ,13,10,27,75,0,0,0,4,13,10,27,60,0

For FLASH, LOAD "FLASH1" CODE 32768 and enter the following as a direct command.

POKE &1451E,&1B,&18,&1B,&6C,&00,&0A,&0 A,&0A,&00,&1B,&33,&19,&1B,&4B,&00,&01,

&00,&1B,&33,&19,&1B,&4C,&40,&02

Then resave, using SAVE "FLASH1" CODE 32768,57344.

Geoff mentions that this works on small and large dumps and on small grey dumps, but on large grey dumps still gives incorrect line spacing. Geoff wonders if anyone has a fix for this as the program seems to alter the line spacing itself!

Next, SAM verification. Ray Bray of Porton, Salisbury, writes, mentioning that Carol Brooksbank drew attention to a problem in Jauary 1991's FORMAT - she wasn't able to VERIFY after SAVEing her "Money Manager" program. If the option to set the "verify" flag is positioned before the line calling the SAVE function, then verification will work.

To get round the problem of being unable to verify data arrays, Ray now saves the contents of any array as CODE. To do this. you have to find the START address by using the LENGTH function. Then calculate the length of the code by multiplying all the dimensions of the array. To re-load, the array must first have been dimensioned, and again, the LENGTH function must be used to find the current position of the array. One point not mentioned in the user-guide, says Ray, is that LENGTH only gives the start address for one and two-dimensional arrays. For arrays with more dimensions than this, two bytes have to be added to the address for each additional dimension. Failure to allow for this will result in the loss of the relevant number of bytes from the end of the array when you save the code. Many thanks, Ray.

Back to Mattias, now. He had a look at BIGLETTERS, and has done even better. Well, that's what he claims. This program not only allows for enlargements up to the full size of the screen; it also lets you write in any direction. Even upside down. Instructions follow.

The command is BIG "message",

direction, width, length, x start, y start.

Where direction = 1: left to right
2: right to left
3: down to up
4: up to down

Here's his program, which includes a pretty smart demo.

```
   1 CLS
   3 PEN 5: big "BIG",1,5,15,60,150
   4 PEN 3: big "BY",2,5,3,160,40
  10 PEN 6: big "Mattias",3,4,2,0,30
  11 PEN 4: big "Danielson",4,4,2,230
     ,160
  20 PEN 15: big "910219",1,1,4,98,14
     0: PEN 7
  21 PEN 2: big "BIG",1,12,24,-20,173
  22 PEN 1: big "BIG",3,36,8,0,50
1000 DEF PROC big a$,d,w,l,x,y
1001 SCREEN 1: CLOSE SCREEN 2: OPEN S
     CREEN 2,4: DISPLAY 1: SCREEN 2
1002 LET xos=0,yos=0
1003 RECORD TO b$: FOR xs=0 TO w-1: P
     LOT xs,0: DRAW 0,1-1: NEXT xs: R
     ECORD STOP
1004 SCREEN 1: CLOSE SCREEN 2
1005 ON d: LET y1=0,y2=7,ys=1,x1=7,x2
     =0,xs=-1: LET y1=7,y2=0,ys=-1,x1
     =7,x2=0,xs=-1: LET y1=0,y2=7,ys=
     1,x1=0,x2=7,xs=1: LET y1=0,y2=7,
     ys=1,x1=0,x2=7,xs=1
1006 FOR f= 1 TO LENGTH(1,a$): LET p$
     =a$(f)
1007 FOR yy= y1 TO y2 STEP ys: FOR xx
     =x1 TO x2 STEP xs
1008 IF ((PEEK (UDG (p$)+yy )) BAND (
     2↑xx))>0 THEN ON ERROR GOTO 1012
     : LET xos=x,yos=y-1: BLITZ b$
1009 LET x=x+(w AND d=1)-(w AND d=2),
     y=y+(1 AND d=4)-(1 AND d=3)
1010 NEXT xx: LET y=y-(1 AND d<3)+(8*
     1 AND d=3)-(8*1 AND d=4),x=x+(w
     AND d=3)-(w AND d=4)-(8*w AND d=
     1)+(8*w AND d=2)
1011 NEXT yy: LET y=y+(8*1 AND d<4)-(
     8*1 AND d=4) ,x=x+(8*w AND (d=1
     OR d=4))-(8*w AND (d=2 OR d=3)):
     NEXT f
1012 END PROC
```

Finally, Peter Morgalla of Hemel Hempstead, Herts, has sent in a nice little quickie. Peter says that he's recently been playing around with "Flash!", and has had problems in loading MODE 1 files saved as SCREEN$ screens. This little snippet merely converts the file to a code file which will automatically load into the SAM's correct screen memory address. The double transfer within memory allows for "change disc" prompt messages to be seen on screen, as often one wishes to resave on another disc. A word of caution: make sure that the disc on which you are saving the file does not have a file of the same name already on it, otherwise the overwrite message will corrupt the lower part of the screen.

Here it is...

```
  10 REM ********************
  20 REM *    FLASH SCREEN$    *
  30 REM *BY PETER R MORGALLA*
  40 REM *      MODE 1 FIXER    *
  50 REM ********************
  60
 100 MODE 1: CLEAR 50000-1: DIR 1
 110 INPUT "NAME OF SCREEN TO MODIFY:
     ";A$
 120 INPUT "SCREEN NAME TO SAVE: ";B$
 130 LET SCR=((IN 252 BAND 31) +1)*16
     384
 140 LOAD A$ CODE 50000
 150 CLS : PRINT AT 10,6;"INSERT DISC
     TO SAVE"; AT 12,11;"PRESS KEY":
     GET Z
 160 LET P$= MEM$(50000 TO 50000+6912
     )
 170 POKE SCR,P$
 180 SAVE B$ CODE SCR,6912
 190 STOP
9999 DEF PROC SA: SAVE "SCREEN$CHG" L
     INE 100: END PROC
```

And that's really all for this month. If I don't see you at the All Formats Fair, I'll see you next month.

Please keep the bits and pieces coming to:-

John Wase,
Green Leys Cottage,
Bishampton,
Pershore,
Worcs,
WR10 2LX.

And thanks for your support.
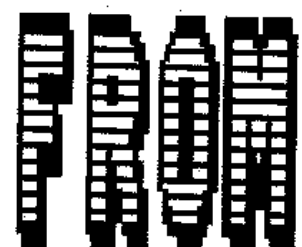
By:- Luca Alimandi.

Dear FORMAT friends,

Last month I mentioned my program to improve the Wordmaster on-screen character set.

If you want to try my characters, type in the Basic program "Alter 1" and RUN it. But remember, to be on the safe side, it is better to modify a copy of "WM" and not the original program on your master disc.

```
 10 DATA 0,0,0,0,0,0,0,0,0,34,34,34,3
    4,0,34,0,0,85,85,0,0,0,0,0,0,85,1
    19,85,85,119,3,65
 20 DATA 85,0,0,34,119,68,119,17,119,
    34,0,68,68,17,34,68,17,17,0,34,85
    ,34,102,187,255,0,0,34,68,0,6,147
 30 DATA 0,0,0,0,0,34,68,68,68,68,34,
    0,0,68,34,34,34,34,68,0,0,0,85,34
    ,119,34,85,0,0,0,3,201
 40 DATA 34,34,119,34,34,0,0,0,0,0,0,
    34,34,68,0,0,0,0,119,0,0,0,0,0,0,
    0,0,102,102,0,2,202
 50 DATA 0,17,17,34,34,68,68,0,0,34,8
    5,85,85,85,34,0,0,34,102,34,34,34
    ,119,0,0,34,85,17,34,68,4,217,119
 60 DATA 0,0,102,17,34,17,17,102,0,0,
    17,51,85,85,119,17,0,0,119,68,102
    ,17,17,102,0,0,51,68,102,5,148
 70 DATA 85,85,34,0,0,119,17,34,34,68
    ,68,0,0,34,85,34,85,85,34,0,0,34,
    85,85,51,17,102,0,0,0,4,251
 80 DATA 0,34,0,0,34,0,0,0,34,0,0,34,
    34,68,0,0,17,34,68,34,17,0,0,0,0,
    119,0,119,0,0,2,134
 90 DATA 0,0,68,34,17,34,68,0,0,34,85
    ,17,34,0,34,0,0,102,255,221,170,1
    36,119,0,0,34,85,85,119,85,7,44
100 DATA 85,0,0,102,85,102,85,85,102,
    0,0,34,85,68,68,85,34,0,0,102,85,
    85,85,85,102,0,0,119,68,102,7,61
110 DATA 68,68,119,0,0,119,68,119,68,
    68,68,0,0,34,85,68,119,85,34,0,0,
    85,85,119,85,85,85,0,0,119,7,61
120 DATA 34,34,34,34,119,0,0,17,17,17
    ,85,85,34,0,0,85,85,102,102,85,85
    ,0,0,68,68,68,68,68,119,0,5,233
130 DATA 0,85,119,119,119,85,85,0,0,1
    19,85,85,85,85,85,0,0,34,85,85,85
    ,85,34,0,0,102,85,85,102,68,7,214
140 DATA 68,0,0,34,85,85,85,85,34,17,
    0,102,85,85,102,102,85,0,0,51,68,
    34,17,17,102,0,0,119,34,34,5,250
150 DATA 34,34,34,0,0,85,85,85,85,85,
    119,0,0,85,85,85,85,85,34,0,0,85,
    119,119,119,119,34,0,0,85,6,249
160 DATA 85,34,34,85,85,0,0,85,85,85,
    34,34,34,0,0,119,17,34,34,68,119,
    0,0,119,68,68,68,68,119,0,6,45
170 DATA 0,0,68,102,34,51,17,0,0,119,
    17,17,17,17,119,0,0,34,85,0,0,0,0
    ,0,0,0,0,0,0,0,0,2,185
180 DATA 0,255,0,34,17,0,0,0,0,0,0,0,
    102,17,119,85,119,0,0,68,68,102,8
    5,85,102,0,0,0,34,85,5,97
190 DATA 68,85,34,0,0,17,17,51,85,85,
    51,0,0,0,34,85,119,68,51,0,0,17,3
    4,119,34,34,34,0,0,0,4,98
200 DATA 51,85,85,51,17,102,0,68,68,1
    02,85,85,85,0,0,34,0,102,34,34,11
    9,0,0,17,0,17,17,17,85,34,5,114
210 DATA 0,68,85,102,102,85,85,0,0,34
    ,34,34,34,34,17,0,0,0,85,119,119,
    119,85,0,0,0,102,85,85,85,6,62
220 DATA 85,0,0,0,34,85,85,85,34,0,0,
    0,102,85,85,102,68,68,0,0,51,85,8
    5,51,17,17,0,0,51,68,5,63
230 DATA 68,68,68,0,0,0,51,68,34,17,1
    02,0,0,34,119,34,34,34,17,0,0,0,8
    5,85,85,85,51,0,0,0,4,115
240 DATA 85,85,85,85,34,0,0,0,85,119,
    119,119,34,0,0,0,85,85,34,85,85,0
    ,0,0,85,85,85,51,17,102,6,113
250 DATA 0,0,119,17,34,68,119,0,0,51,
    34,68,34,34,51,0,0,34,34,34,34,34
    ,34,0,0,102,34,17,34,34,4,30
260 DATA 102,0,0,85,170,0,0,0,0,0,102
    ,136,187,170,187,136,153,102,0,0,
    0,0,0,0,0,0,0,0,0,0,5,250
270 PRINT "Put in drive 1 the disc fr
    om    which you want load ""WM_DS
    ""    code then press any key..."
280  PAUSE 0: CLEAR 50000: LOAD d1"WM
    _DS"CODE
290 LET k=64512
300 FOR l=1 TO 26: PRINT AT 10,5;"Loa
    ding data in line ";l*10
320 LET c=0: FOR d=1 TO 30: READ n: L
```

```
      ET c=c+n: POKE k,n: LET k=k+1: NE
      XT d
350 READ n: READ m: LET chk=256*n+m
360 IF c<>chk THEN  PRINT AT 14,6; FL
    ASH 1;"Error in line ";1*10: STOP
370 NEXT 1
380 POKE 61045,25: POKE 61049,24
390 POKE 59443,0: POKE 59444,0: POKE
    59445,0
400 CLS : PRINT "Put in drive 1 the d
    isc in whichyou want save the new
     version of""WM_DS"",then press a
    ny key...": PAUSE 0
420 SAVE d1"WM_DS"CODE 54174,11362
```

When you load a SCREEN$ to create a graphic file (with option GRAPH), you may notice that the last two lines get lost. This can be a nuisance when you want to print the entire SCREEN$. So I have found out how to compress the last two lines too. This is done by the POKEs in line 380 and 390 above. If you are not interested in these, you can leave them out.

Now we come to the the HEADLINER! program. I think that this designer is rather poor for preparing good, complex screens; I prefer to use other specific graphics programs (like Art Studio or Artist II). But Headliner! has an important feature which I use a lot - It can print headlines, titles and logos with Giant Fonts.

So I have put my hands on Headliner! too, and I have modified the program so that we can set the space between the letters from 0 to 15 pixels. The modified Headliner! works in the same way as the original version, except that when you enter the option GRAPH (to print with the Giant Fonts) the bottom line, which was like this:-

CAPS LOCK Off BOLD Off ITALICS Off WIDTH 2 DEPTH 2
becomes like this:-
CAPS Off BOLD Off ITAL Off WIDTH 2 DEPTH 2 L.SP 2

L.SP stands for Letter Spacing, and you can alter it by pressing Symbol Shift + Q. Each time you press SS/Q, L.SP is incremented and when it reaches 16 it is zeroed. Try it out with a Fnt6 Font and different L.SP values. You will see the SPACE between words changes proportionally too.

To make the modification, simply type in the program below and RUN it. Remember to overwrite a copy of the program and NOT YOUR ORIGINAL MASTER.

```
10 DATA 205,148,250,254,199,192,33,1,
   106,245,126,60,230,15,119,198,8,50
   ,198,105,214,8,33,200,107,54,32,25
   4,10,56
20 DATA 4,54,49,214,10,198,48,35,119,
   221,33,152,107,205,130,241,241,201
   ,128,212,23
30 DATA 79,102,102,32,66,79,76,68,32,
   79,102,102,32,73,84,65,76,32,79,10
   2,102,32,87,73,68,84,72,32,50,32
40 DATA 68,69,80,84,72,32,50,32,76,46
   ,83,80,32,32,50,164,11
50 CLEAR 34730: PRINT "Put in drive 1
    the disc from    which you want L
   OAD ""HEADLINER!"" then press any
   key...": PAUSE 0
80 LOAD d1"HEADLINER!"CODE 34734
90 LET chk=0: FOR k=38825 TO 38873: R
   EAD a: POKE k,a: LET chk=chk+a: NE
   XT k
100 READ n: READ m: IF chk<>n+256*m TH
    EN PRINT ' FLASH 1;"Error in DATA
    lines 10 or 20": STOP
110 LET chk=0: FOR k=37549 TO 37593: R
    EAD a: POKE k,a: LET chk=chk+a: NE
    XT k
120 READ n: READ m: IF chk<>n+256*m TH
    EN PRINT ' FLASH 1;"Error in DATA
    lines 30 or 40": STOP
130 POKE 37136,198: POKE 37137,2
140 POKE 36967,153: POKE 36968,112
150 POKE 37235,158: POKE 37236,107
160 POKE 36917,185: POKE 36918,107
170 POKE 36927,193: POKE 36928,107
180 POKE 36941,167: POKE 36942,107
190 POKE 36949,176: POKE 36950,107
200 POKE 34757,52: POKE 34758,49
210 POKE 34759,52: POKE 34760,48
220 POKE 34763,43: POKE 34764,16
230 CLS : PRINT "Put in drive 1 the di
    sc in whichyou want SAVE ""HEADLIN
    ER!"",thenpress any key.": PAUSE 0
240 SAVE d1"HEADLINER!"CODE 34734,4140
```

I hope you find these modifications to the PCG DTP pack useful. Drop me a line if you have any ideas for other improvements. And I will write again when I have some more programs and ideas to share. Goodbye for now.

Luca Alimandi, Via Acquedotto Del Peschiera, 146, 00135 Roma, Italy.

13

THOUGHT SPOT.

By:- Jeremy Cook.

Welcome to this month's Thought Spot. As ever there is a selection of puzzles of various kinds with which you can exercise your brain muscles. If you missed Thought Spot over the last couple of months then we apologise for the inconvenience. The main troubles were Christmas, postal problems and things happening in the FORMAT office.

First we have the by now famous prize puzzle, for which the winner is awarded ONE YEARS FREE SUBSCRIPTION to FORMAT! So, even if it looks a little daunting to start with, have a think, perhaps look in a book, and give it a go - you might surprise yourself!

PRIZE PUZZLE NO.6 - SLIDING BLOCKS

This has cropped up in so many guises that I wouldn't believe anybody who told me they had never come across it before. The idea is to start from a jumbled position, such as in the left diagram below, and by sliding blocks into the space, end up with all the numbers in the correct order, as in the right diagram. So in the example, one of the blocks 13, 6, 4, or 3 can be slid into the space, thus creating a different space that other blocks can be slid into. All you have to do is write a program to solve the puzzle for you, but preferably in the minimum number of moves, where one move is moving one block into the space.

2	7	13	12
15	6		4
14	1	3	9
10	5	8	11

-->

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	
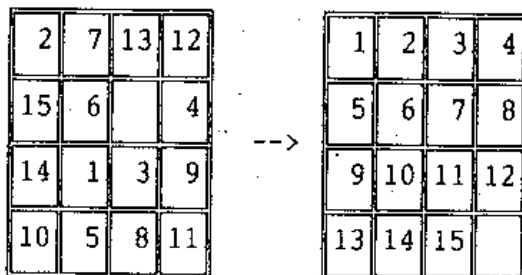
A simple display of the moves is

expected, but they need not be stored. The program only needs to be able to cope with the 4x4 case, though you can make it cope with any size of puzzle if you like. The start position in the left diagram may be used as a test. Send your program, to arrive by 1st June 1991, direct to me at:-

Thought Spot,
c/o Jeremy Cook,
Wainbody House,
135, Kenilworth Road,
Coventry.

(Note that discs/cassettes will only be returned if an SAE is enclosed).

Now on to those puzzles for which the only reward is the satisfaction of having completed them.

LETTER SUM

Below is a sum with letters substituted for digits. The same letter stands for the same digit wherever it occurs, and different letters stand for different digits. Write the sum with the numbers substituted for letters.

```
  OELIB
  BLIBB
  -----
  EEEYE
  -----
```

COMPLETE THE WORD

Here is a list of words with some of their letters missing. Can you work out what the word is given the brief definition?

1. F-n-s--   artfulness
2. F-o--s---t   flowering
3. F--n--y   servant or footman
4. F--u-u-   silly, idiotic
5. F--m--.t   something invented or imagined
6. F----g-n--- containing iron

7. F-l-c---us   apt, happy in manner
8. F-r-b--i--   an omen or presentiment
9. Fr---r---e   to associate with
10 F--eti--s   waggish, jocular

PENTOMINOES

Pentominoes are shapes that can be made from arrangements of five squares. There are twelve different pentominoes, as shown here.
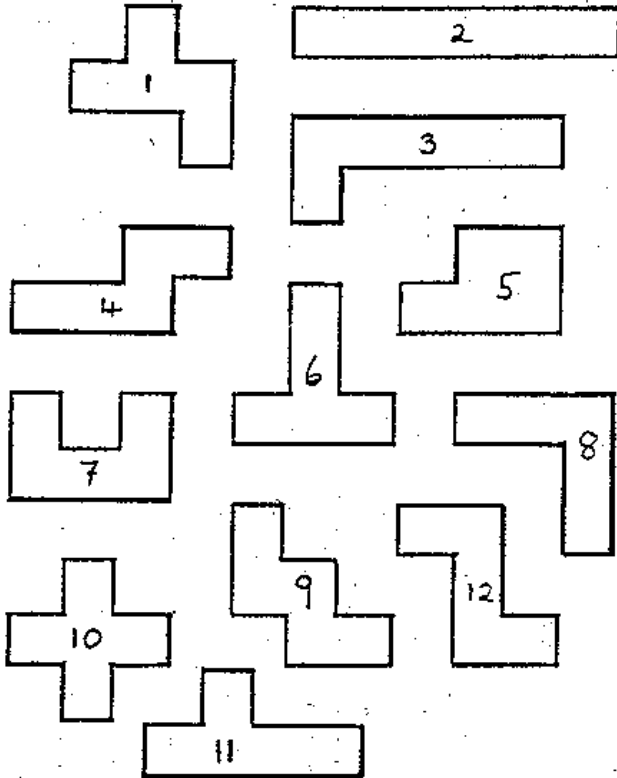
The problem is to fit them all into a 6x10 area, without overlap. The examples below are just some of the 2339 solutions (with no repetitions).
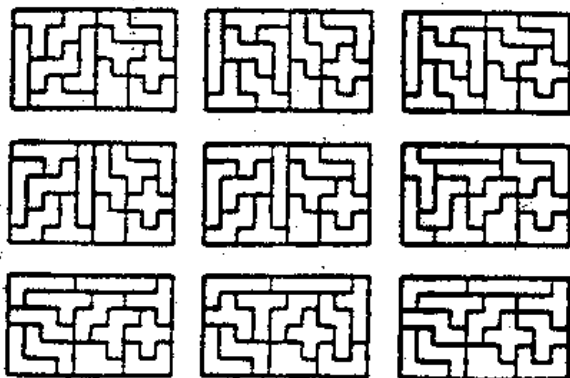
All you have to do is find another solution. Sounds easy? Try it! You will find it helpful to cut out a set of pentominoes, and draw a 6x10 area to fit them into (you are allowed to rotate and turn over the pentominoes).

It is not very easy, unless you happen to be lucky. I suspect that you will be able to fit the first eleven reasonably well, but the space remaining will be just right for a pentomino you have already used. Once you tire of this, a more interesting problem (in my opinion) is to write a program to fit the pentominoes for you (note that this is NOT a prize puzzle - but it might be in the future).

Sadly, yet another Thought Spot draws to a close. Before you put your brains back in their boxes, ponder on this: a swallow can fly, but can a fly swallow? Alternatively, if you would like to tell me how good you think my puzzles are, drop me a line.

- * - * - * - * -

SOLUTIONS TO DECEMBERS PUZZLES

Rebus:- 1. Churchyard
       2. Arctic Circle
       3. Sleeping quarters

Dot-to-dot:- I am afraid I can't do 2) in less than seven lines; has anyone out there done it?
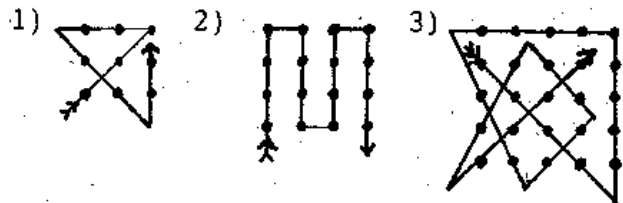
Letter Sum:-
```
  8594
  1594
  -----
 10188
  -----
```

Homophones:- 1. Censor, Sensor
      2. Pale, Pail
      3. Isle, Aisle
      4. Ate, Eight
      5. Dear, Deer
      6. Whole, Hole
      7. Earn, Urn
      8. Roar, Raw

Taking initial letters gives SPIED HER, which sounds like SPIDER.

You will notice that I am not giving the results of the previous Prize Puzzles this month, more about this next time.

MINI CALENDER

A Conversion To Sam

By:- Peter Morgalla.

You may remember the calendar program by R.H.Doughty, published in FORMAT Vol 4, No 1? Well here is a translation for the SAM Coupé. As a result of converting the program my son's school were supplied with sufficient to satisfy needs for their Christmas master-pieces. For a full explanation of how the program works refer to the original article.

```
 10 REM <MINI CALENDAR>
 30 CLS #
 40 CSIZE 8,16: PRINT AT 4,8;"CALEND
    AR PRINTER"
 50 CSIZE 8,8: INPUT "ENTER YEAR REQ
    UIRED: "; LINE A$: LET Y=VAL A$
 60 IF Y<1989 OR Y>2099 THEN GOTO 50
 70
 80 LET TOTSTEPS=7+Y-1989+INT ((Y-19
    89)/4)
 90 LET JAN1D=7+TOTSTEPS-7*INT ((7+T
    OTSTEPS-1)/7)
100 LET M$="JANFEBMARAPRMAYJUNJULAUG
    SEPOCTNOVDEC"
110 LET D$=" MON TUE WED THU FRI SAT
     SUN"
120 RESTORE 130
130 DATA 31,28,31,30,31,30,31,31,30,
    31,30,31
140 DIM N(12)
150 FOR A=1 TO 12: READ N(A): NEXT A
160 IF Y-4*INT (Y/4)=0 THEN LET N(2)
    =29: GOTO 180
170 LET N(2)=28
180 REM
190 LET MID=JAN1D
200 DIM P$(12,8,28): CLS : PRINT AT
    10,10;"PLEASE WAIT"
210 GOSUB 690
220 FOR M=1 TO 12
230 DIM C$(168)
240 LET S$=""
250 FOR N=1 TO MID-1: LET S$=S$+" -
    ": NEXT N
260 LET N$="  1   2   3   4   5   6
     7   8   9  10  11  12  13  14
    15  16  17  18  19  20  21  22
    23  24  25  26  27  28  29  30
    31 "
270 LET E$=""
280 FOR B=1 TO 42-MID-N(M)+1: LET E$
    =E$+" - ": NEXT B
290 LET C$=S$+N$(1 TO 4*N(M))+E$
300 LET P$(M,1)="        "+M$(3*M-2
    TO 3*M)+" ,"+STR$ Y
310 LET P$(M,2)=D$
320 FOR L=0 TO 5
330 LET P$(M,L+3)=C$(1+28*L TO 28+28
    *L)
340 NEXT L
350 LET MID=7-(LEN E$/4-7*INT ((LEN
    E$-4)/28))+1
360 NEXT M
370 CSIZE 8,8: CLS
380 CLS : PRINT AT 10,6;"  SWITCH ON
     PRINTER"; AT 12,4;"PRESS ANY KE
    Y TO CONTINUE": PAUSE 0
390 CLOSE #5: OPEN #5,"b"
400 PRINT #5;CHR$ 27;"@"
410 CSIZE 8,16: CLS
420 PRINT AT 2,10;"PRINT: ";Y: CSIZE
    8,8
430 PRINT AT 10,2;"A:   CALENDAR"
440 PRINT AT 14,2;"B:   COVER"
450 PRINT AT 18,2;"C:   QUIT"
460 GET A
470 IF A=12 THEN STOP
480 IF A=11 THEN GOTO 720
490 IF A=10 THEN GOTO 510
500 GOTO 460
510 PRINT #5,CHR$ 10;
520 PRINT #5,CHR$ 15;
530 PRINT #5,CHR$ 27;CHR$ 79;
540 PRINT #5,CHR$ 27;CHR$ 56;
550 PRINT #5,CHR$ 27;"Q";CHR$ 137;
560 PRINT #5,CHR$ 27;"G"
570 PRINT #5,R$
580 FOR M=1 TO 12
590 IF M=1 THEN GOSUB 930
600 LPRINT ''
610 FOR L=1 TO 8
620 PRINT #5,"   " + P$(M,L) + "
       " + P$(M,L) + "           "+P$(M,
    L)+"           "+ P$(M,L)+"      "
630 NEXT L
640 PRINT #5,R$
650 IF M=6 THEN CLS : FOR N=1 TO 9:
    LPRINT : NEXT N: PRINT AT 10,7;"
    INSERT FRESH SHEET"; AT 12,4;"PR
```

```
            ESS ANY KEY TO CONTINUE ": PAUSE
            0: GOSUB 930: LPRINT : PRINT #5
            ,R$
 660 NEXT M
 670 FOR N=1 TO 9: LPRINT : NEXT N
 680 GOTO 400
 690 LET J$="        ",L$="
                        "
 700 LET Q$=J$+"+"+J$+J$+"        +"+J
     $( TO 9)+"+    "+J$+J$+"   +",R$
     ="-   "+L$+"    +    "+L$+"    +
     "+L$+"   + "+L$+"   -"
 710 RETURN
 720 CLS : PRINT AT 10,6;"SET TO FRIC
     TION FEED"; AT 12,5;"INSERT SHEE
     T FOR COVER"; AT 14,4;"PRESS ANY
     KEY TO CONTINUE": PAUSE 0
 730 CLS : PRINT AT 10,5;"PRINTING CO
     VER FOR ";Y
 740 GOSUB 960
 750 FOR A=1 TO 2
 760 PRINT #5;Q$
 770 FOR P=1 TO 12: LPRINT : NEXT P
 780 PRINT #5;Q$
 790 FOR P=1 TO 5: LPRINT : NEXT P
 800 GOSUB 1010
 810 LET T$="        Calendar
     Calendar"
 820 PRINT #5;T$
 830 LPRINT : LPRINT
 840 LET U$="        "+STR$ Y+J$+"
     "+STR$ Y
 850 PRINT #5;CHR$ 14
 860 PRINT #5; U$
 870 FOR P=1 TO 5: LPRINT : NEXT P
 880 GOSUB 960
 890 PRINT #5;Q$: LPRINT : LPRINT
 900 NEXT A
 910 FOR N=1 TO 15: LPRINT : NEXT N
 920 GOTO 400
 930 CLS : PRINT AT 10,3;"PRINTING CA
     LENDAR FOR ";Y
 940 PRINT AT 12,13;"PAGE ";"1" AND M
     <6;"2" AND M>=6
 950 RETURN
 960 CLOSE #5: OPEN #5,"b"
 970 PRINT #5;CHR$ 27;"@"
 980 PRINT #5;CHR$ 27;CHR$ 56
 990 PRINT #5;CHR$ 27;CHR$ 79
1000 RETURN
1010 PRINT #5;CHR$ 27;"4"
1020 PRINT #5;CHR$ 14
1030 PRINT #5;CHR$ 27;"E"
1040 PRINT #5;CHR$ 27;"G"
1050 RETURN
1060 STOP
9999 DEF PROC SA: SAVE "CALENDAR" LIN
     E 10: END PROC
```

By:- Brent Stevens.

The first thing Coupé users want to do, when they first get their new machine, is to use it! No surprise, but when a machine is new there is little in the way of commercial software, what can be done other than putting it back in the box, and waiting until more things turn up?

Well luckily, not many users have taken this attitude, instead they have been learning to program in Basic and machine code. Already the results of this are becoming available through a wide multitude of Public Domain (PD for short) libraries, disc-based magazines, utility discs, and demo discs. The SCPDSA has been set up, as a member of TEAM SAM, to make all of this software available, to those who need it - the users, and to also bring out any talent in programmers that could write commercial programs.

The SCPDSA, or SAM Coupé Public Domain Software Association, has one primary aim, to cater for the PD market, so what exactly is PD, you may ask?

Public Domain software remains the copyright property of the author but can be copied and given to friends, neighbours, etc. However, copies cannot be sold by anyone, PD librarys can only charge for their services - not for the software itself. There is something similar to PD called FREEWARE, where the software is completely free from copyright, and this is sometimes mixed up with PD. Sometimes the press gets things muddled, causing confusion and chaos, so the SCPDSA is here to put it right. Anything ever reviewed in this section is Public Domain.

There are various laws and legalities concerning Public Domain, so a list of guidelines, following these rules has been drawn up, and is available to anyone who produces or distributes PD software. It is not the intention of the SCPDSA to enforce the laws, but to point out where someone is going wrong, so they don't fall into a legal mess.

At the moment, there is a good selection of screens, some taken from ST's, music that outdoes any other computer for under £800, also including snippets of digitised sound samples, where the quality is almost as good as the real thing, utilities such as sprite editors, file un-erasers, databases, not forgetting graphics demos such as the 74 screen Total Recall animation, and various other creations, and last but not least, the occasional game. One game in particular, is the Tetris version, in machine code, that would have been good enough to have been a commercial game (see FRED below).

It all sounds so good, but where do you get it all from and what exactly is available? The answer is simple! The SCPDSA produces a catalogue, called "SAMsational Software" (ahem), that lists every disc, with an account of all the items on the disc, and an indication of quality. The catalogue is updated quarterly, with all the latest PD software, and is available through yearly subscription, for just £2.00, (only £1.50 to INDUG members) and that also includes a free demo disc, packed with screens, two very good tunes, a palette demo, a digitised part of a Kim Wilde song, and a Monty Python-like adventure called Chocolate Factory. This disc is intended to be just a taste of what to expect on the Sam Coupé.

The following PD producers have registered with he SCPDSA:- Fred, Turbo, Fastline, SAMdisk, Relion

(Encelladus), CMS, Guy Middleton, and the SCPDSA's own EUROSOFT, which consists of contributions from European authors. As the coverage becomes greater, more contributers will be submitting their work, and issues 2 and 3 are expected to double in size. Already, other established PD software companies have become interested, and many more are pledging support once various software items have been completed.

So what is FORMAT doing about this? Well, you're reading it. A monthly PD section, with updates and reviews, order codes, etc. on all the latest PD software around. If you think that's good, well how about offering discounts on selected PD items. No problem! First discount is on a subscription to "SAMsational Software", and soon, some software will be discounted as well.

One incredible task the Coupé can handle, is to convert Atari ST screens, straight to SAM MODE 4 screens, by loading the screen from disc using a special program. As the ST has digitisers and scanners (not long now for SAM versions) many digitised screens, owe their fame to this.

So who does what? Here's a review on everything so far:

First, there's FRED, a disc magazine. This has regular features such as screens, news of products, utilities, tutorials, and of course, a magazine part. Sometimes, the odd game has been included, such as a SAM specific version of TETRIS, with incredible stereo sound (get a SAMplifier with stereo headphones to hear this at its best), and a digitised background. Interviews are a common feature of every issue, and also various demos of sprite handling through BASIC, or incredible music. Fred has been out for some time now, and is quite well estabished. It is probably the biggest disc magazine, but others are begining to catch up.

If you don't like games all that

much, the utilities should help out. There are things like file unerasers, to filing programs. FRED comes out on a monthly basis, and the price of £1.20 each makes it unbeatable value for money. There are now 9 issues, the last 7 being SCPDSA AWARD WINNERS.

Now onto more utilities: Enceladus by Relion Software forms the name of 3 high quality discs, all packed with utilities. There are the scalling programs, that allow fast machine code scalling of screen areas (shrinking and enlarging). The results are in colour, so ex-Spectrum ARTIST II users will be in for a pleasant surprise. Then there are the mode switchers – these programs really allow different modes to be displayed on one screen at once, either horizontally, or vertically. Other utilities include copiers, compressors, sceen wrappers (makes the screen display into a ball shape), etc. All discs are SCPDSA award winners, priced at £3.99 each.

Edwin Blink in Holland, has contributed a disc of 5 sampled song extracts. The quality is outstanding, also included is a disc directory reader, and sound frequency to octave/tone converter (which can also do the reverse). This disc is distributed by the SCPDSA, and costs just £1.25. It is an SCPDSA AWARD WINNER as well, and forms the first Eurosoft disc. If you live in Europe, and have produced a full disc of original software (sceens, demos, utilities, etc.), then we will distribute it for you, and pay you royalties of 15p to 25p per disc sold. Rest of World, may form the basis of WORLDSOFT discs.

Turbo have a PD library of 11 discs, although by the time you read this, the number may be up to 14. Prices are around £2.00. On these discs, are collections of screens, and utilities, demos, and very simple BASIC games. The games appear to look identical to Spectrum type-ins, found in the early magazines, but can fill periods of boredom during hoildays, etc.

SAMdisk is a relative newcomer,

20

along the lines of FRED. It features another high quality magazine disc, although only 2 issues are available and at £2.00 each. They feature a good mix of demos, screens, and simple games, also reviews on products, software, etc. These are updated quarterly, and a review of the next issue may be out in time for my next FORMAT column. So far, the 2 issues of SAMDISK are SCPDSA AWARD WINNERS, and I expect the next issue will be as well.

Enigma have produced an item of PD software. The Sphera demo disc. This costs just £1.00, and if you are wandering what all the fuss is about Sphera just take a look at this breathtaking demo. An SCPDSA AWARD WINNER, not to be missed (unless you've got Sphera already!).

Guy Middleton produces several animation demos, using MODE 1 screens, with exception to the Executive version of the Total Recall Film Demo (an SCPDSA AWARD WINNER). The demos consist of as many as 70 or so screens, played back one after another, at considerable speed, making a movie clip. The demos also include Robocop, Star Wars, Mad Max, and a Christmas Quizz, featuring many MODE 1 digitised stills. Prices vary from £2.00 to £3.00.

If you are looking for slightly better quality animation demos, Fastline has the answers. At present, an Aliens (film with Sigourney Weaver) film demo comprising of 16-shade MODE 4 screens, and small animation sequences has just become available taking up 2 discs. The discs contain more screens, but the animation sequences are shorter. Other demos are being worked on, and next issue of FORMAT will cover these in more detail. Fastline is a PD library like Turbo, however, there are numerous slideshows (screens), and around 35 discs. The catalogue reviews were taken from information sheets, and will be re-reviewed, with a few SCPDSA AWARD WINNERS, as necessary (as the Aliens Disc is). Prices vary from £1.70 to £2.20. A few handy utilities are mixed in as well.

Next month there will be actual reviews on new discs, and reviews on existing discs, by demand. If you are interested in subscribing to the SCPDSA, and hence ordering some of the PD software, just use the form below (or a photocopy of it). If you have already subscribed, clearly quote your INDUG number on your next order, and deduct 50p from that particular order.

One last note, away from the subject - I would like to wish my Ex-Housemaster at Colston's School, Mr R.I.G.Findlay, who was shot by a pupil recently, to have a speedy recovery, and I will be visiting in the not so far future.

==

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==

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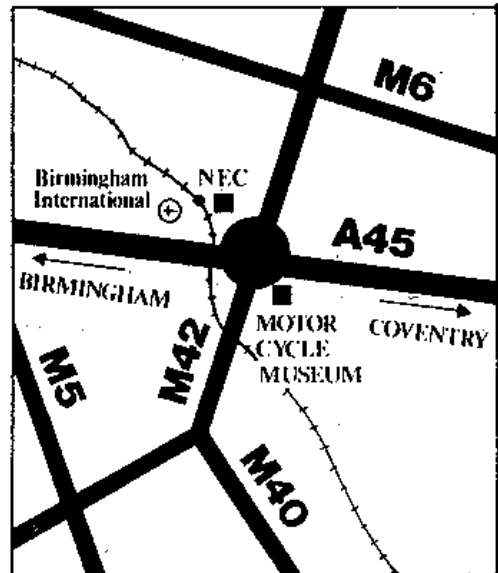Book with: ——————————————

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MONEY MANAGER

By:- Carol Brooksbank.

We begin this month with the option 6 menu - menu6.

```
6000 REM THE CHANGE CALENDAR OPTION?
6005 LABEL menu6: CLS : LET togflag=0
6010 CSIZE 8,16: PRINT "      CHANGE C
     ALENDAR MENU"
6015 CSIZE 8,8
6020 PRINT : PRINT : PRINT INVERSE 1;
     "1) ADD ENTRIES"
6025 PRINT : PRINT INVERSE 1;"2) DELE
     TE ENTRIES"
6030 PRINT : PRINT INVERSE 1;"3) CHAN
     GE ENTRIES"
6035 PRINT : PRINT INVERSE 1;"4) VIEW
     CALENDAR"
6040 PRINT : PRINT INVERSE 1;"5) PRIN
     TED COPY OF CALENDAR"
6045 PRINT : PRINT INVERSE 1;"6) VIEW
     ASSIGN": PRINT "   View amount
     set aside for      bills on pay
     day" : PRINT : PRINT : PRINT INV
     ERSE 1;"9) EXIT TO MAIN MENU"
6050 PRINT AT 20,0; INVERSE 1;"Keys D
     /E toggle funds display"
6055 PRINT AT 21,0; PAPER 6; PEN 0;"S
     ELECT OPTION NUMBER OR D/E"
6060 LABEL men6: GET opt
6065 IF opt=0 THEN wrongoption: GOTO
     menu6
6070 IF opt>6 AND opt<9 THEN wrongopt
     ion: GOTO menu6
6075 IF opt>9 AND opt<13 THEN wrongop
     tion: GOTO menu6
6080 IF opt >14 THEN wrongoption: GOT
     O menu6
6085 IF opt=13 OR opt=14 THEN LET men
     no=6:toggle
6090 GOTO 6000+(100*opt)
```

You can see that this has more choices than any of the other option menus that we have written so far. Its exit option is:- 6900 GOTO menu

Another menu - because the CHANGE CALENDAR menu is unique in that some of its options also have their own menus. This one is menu7, and it is used for adding payments to the calendar.

```
6100 LABEL menu7: CLS : LET togflag=0
     : CSIZE 8,16: PRINT "     CALENDA
     R ADDITIONS MENU": CSIZE 8,8: PR
     INT : PRINT : PRINT INVERSE 1;"1
     ) ADD MONTHLY PAYMENTS": PRINT :
      PRINT INVERSE 1;"2) ADD OCCASIO
     NAL PAYMENTS": PRINT : PRINT : P
     RINT : PRINT : PRINT INVERSE 1;"
     9) EXIT TO PREVIOUS MENU"
6101 PRINT AT 20,0; INVERSE 1;"Keys D
     /E toggle funds display": PRINT
     AT 21,0; PAPER 6; PEN 0;"SELECT
     OPTION NUMBER OR D/E"
6102 LABEL men7: GET opt
6103 IF opt=0 THEN wrongoption: GOTO
     menu7
6104 IF opt>2 AND opt<9 THEN wrongopt
     ion: GOTO menu7
6105 IF opt>9 AND opt<13 THEN wrongop
     tion: GOTO menu7
6106 IF opt>14 THEN wrongoption: GOTO
     menu7
6107 IF opt=13 OR opt=14 THEN LET men
     no=7:toggle
6108 GOTO 6100+(opt*10)
```

Since it is called from menu6, its exit option is:- 6190 GO TO menu6

Menu6, called from the main menu, had 100 lines allocated to it, between 6000 and 6099, and each of its options have 100 lines. With a sub-menu such as menu7, things get very much tighter. The menu, and each of its options, now have only 10 lines each. Thanks to SAM's multiple command lines, we are able to get the whole menu into line 6100, and by using single line steps we can still accomodate the instructions and the lines which determine where the program goes depending on the value of opt. If we were really desperate for space, the IF statements could all have been put in one line too, using ELSE IF (don't type this next line in - it is only an example):-

```
6103 IF opt=0 THEN wrongoption: GOTO
     menu7: ELSE IF opt>2 AND opt<9 T
     HEN wrongoption: GOTO menu7: ELS
     E IF opt>9 AND opt<13 THEN wrong
     option: GOTO menu7: ELSE IF opt
     >14 THEN wrongoption: GOTO menu7
     :ELSE IF opt=13 OR opt=14 THEN L
     ET menno=7:toggle:END IF
```

Throughout the option 6 menus and
routines you should be careful about
the line numbers - most of them are
rather odd step values.

```
11375 DEF PROC update
11380 IF I$="W" THEN LET week=FN B(yea
      r)
11385 IF I$="M" THEN LET month=FN Q(ye
      ar)
11390 END PROC
```

This short procedure is used several
time by · various CHANGE CALENDAR
options and routines. As entries are
added to the calendar, deleted from it
or changed, the value of year - the
variable which holds the grand total
of all the bills in the calendar - is
updated. This means that the amount
set aside on each pay day needs to be
recalculated, and this procedure does
the calculation, using the functions
set up in lines 295 and 315.

```
6110 CLS : PRINT "You will be prompte
     d for the    date (day of the mo
     nth), amount per month, and paye
     e":presskey
6112 entermonth
6114 update
6116 GOTO menu7
```

This is CALENDAR ADDITIONS option 1.
It uses entermonth , at 10255, which
you may remember from early on in the
program. It was used in the part which
sets up the calendar, to put your
original monthly payments in. update
must be called after it is used. When
we were setting up the calendar
originally, the program calculated the
pay day deductions at the end, when
all the payments had been put in, but
now we have to make sure that this
calculation is always up-to-date.

```
6120 CLS : PRINT "Enter each occasion
     al payment    separately, i.e. en
```

```
     ter a        quarterly payment 4
     times,       giving each month a
     nd date      separately":presske
     y:payinstr
6121 POKE SVAR 618,8: INPUT "Month -
     first three letters in     capit
     als, END if finished?"A$
6122 IF A$="END" THEN  update: GOTO m
     enu7
6123 INPUT "Date?";D:findate
6124 INPUT "Amount in figures - no £
     or p    signs?";A: LET year=year+
     A
6125 INPUT "Payee? (ONE WORD, NO SPAC
     ES)";P$:putincal
6126 GOTO 6121
```

ADDITIONS option 2 is again very
similar to the section which added
occasional payments when setting up
the calendar. It uses several of the
early procedures, and again, uses
update before returning to menu7.

```
6200 LABEL menu8: CLS : LET togflag=0
     : CSIZE 8,16: PRINT "   CALENDA
     R DELETIONS MENU": CSIZE 8,8: PR
     INT : PRINT : PRINT INVERSE 1;"1
     ) DELETE MONTHLY PAYMENTS": PRIN
     T : PRINT INVERSE 1;"2) DELETE O
     CCASIONAL PAYMENTS": PRINT : PRI
     NT : PRINT : PRINT : PRINT INVER
     SE 1;"9) EXIT TO PREVIOUS MENU"
6201 PRINT AT 20,0; INVERSE 1;"Keys D
     /E toggle funds display": PRINT
     AT 21,0; PAPER 6; PEN 0;"SELECT
     OPTION NUMBER OR D/E"
6202 LABEL men8: GET opt
6203 IF opt=0 THEN wrongoption: GOTO
     menu8
6204 IF opt>2 AND opt<9 THEN wrongopt
     ion: GOTO menu8
6205 IF opt>9 AND opt<13 THEN wrongop
     tion: GOTO menu8
6206 IF opt>14 THEN wrongoption: GOTO
     menu8
6207 IF opt=13 OR opt=14 THEN LET men
     no=8:toggle
6208 GOTO 6200+(opt*10)
```

Here we have the second CHANGE
CALENDAR sub-menu - the CALENDAR
DELETIONS. Its exit option is:-

```
6290 GOTO menu6
```

The next little procedure is the one
which deletes an entry from a calendar

page.

```
11395 DEF PROC crossoff
11400 LOCAL F: LOCAL F$: LOCAL H$: LET
      F=X-1, F$=G$(1 TO F)
11405 LET H$=G$((X+LEN A$) TO )
11410 LET G$="",G$=F$+H$,CAL$(G,1 TO L
      EN G$)=G$
11415 LET year=year-A
11420 END PROC
```

It is called with the following variables:-

G$ - holding a calendar page
G - holding the page's number
A$ - holding the entry to be deleted
X - holding the position in G$ where a$ starts
A - holding the amount paid in the entry being deleted.

First, a string F$ is set up, holding the page as far as the last character before the start of the entry we want to delete. Next, H$ is set up holding the rest of the page after the unwanted entry.

In line 11410, G$ is cleared, and reconstructed using F$+H$, so leaving out the unwanted entry, and G$ is returned to the calendar. Line 11415 deducts the value of the discarded payment from year.

```
11425 DEF PROC details
11430 CLS : PRINT "You will be prompte
      d for the     date on which the p
      ayment is    made, the amount, a
      nd the name  of the payee, for t
      he entry you wish to delete/chan
      ge."
11435 PRINT : PRINT "These must be ent
      ered EXACTLY asthey appear in th
      e calendar at   present. i.e. The
       amount must   correspond exactl
      y to the amountin the calendar,
      and the payee'sname must be spel
      t the same, andcapital/lower cas
      e letters must be the same."
11440 PRINT : PRINT "If you are unsure
       of any of      these details, pl
      ease view the   calendar to check
      them."
11445 presskey
11450 CLS : PRINT "Do you need to view
      the             calendar?"
```

```
11455 yes_no
11460 END PROC
```

details is an instruction screen used several times in the DELETION and CHANGE options. If an entry in the calendar is to be located, the details given must be exactly those which appear in the calendar. This procedure offers the chance to view the calendar if you are unsure of the date or form of the entry. It returns with Y$ holding Y or N, depending on whether you need to view the calendar.

```
11465 DEF PROC delmonth
11470 LOCAL D: LOCAL B: LOCAL J: LOCAL
      Z: LOCAL A$: LOCAL X: LOCAL X$:
      LOCAL F: LOCAL F$: LOCAL H$
11475 CLS : PRINT "You will be prompte
      d for the     date (day of the mo
      nth) on whichthe payments are ma
      de."
11480 PRINT : PRINT "Please reply ""0"
      " when you have  no more payment
      s to delete."
11485 PRINT : PRINT "There will be a s
      hort pause       while each entry
      is deleted."
11490 PRINT : PRINT "Any months in whi
      ch the payment did not appear wi
      ll be listed."
11495 INPUT "Date? (0 IF FINISHED) ";D
      : IF D<>INT (D) THEN CLS : PRINT
      "YOU HAVE NOT ENTERED A PROPER
      DATE":presskey: GOTO 11475
11500 IF D=0 THEN GOTO endmondel
11505 LET B=D
11510 INPUT "Amount in figures - no £
      or p    signs - which is paid";A
11515 INPUT "Payee? - EXACTLY AS LISTE
      D IN  CALENDAR";P$
11520 LET J=1
11525 RESTORE 105
11530 DO UNTIL J=13
11535 WINDOW 6,28,17,18: PRINT PAPER 6
      ; PEN 0;"DELETING THE ENTRIES"
11540 READ A$,Z
11545 IF D>Z THEN LET D=Z
11550 findate
11555 LET A$=STR$ A+"↑"+P$+"\"
11560 LET X=INSTR(6,G$,A$)
11565 IF X=0 THEN WINDOW : CLS : PRINT
      "THIS ENTRY DOES NOT APPEAR ON
      ": PRINT G$(1 TO 3);" ";G$(4 TO
      5): GOTO 11575
11570 crossoff
11575 LET D=B,J=J+1
```

```
11580 LOOP
11585 CLS 1
11590 WINDOW
11595 GOTO 11495
11600 LABEL endmondel
11605 END PROC
```

delmonth is the procedure which goes through the calendar, deleting a monthly entry. It is very similar in construction to entermonth, the procedure which puts monthly entries in the calendar, but whereas entermonth calls findate and putincal, delmonth calls findate and crossoff.

There is one other difference. You will remember that we said that payments made over, say, 10 months of the year are entered as monthly payments, and then DELETE OCCASIONAL PAYMENTS is used to remove the unwanted entries. In line 11565, any months in which the payment was not made are listed and the program then jumps past the call to crossoff on that loop.

```
6210 details
6212 IF Y$="Y" THEN GOTO menu6
6214 delmonth
6216 update
6218 GOTO menu8
```

We return now to the main program, and CALENDAR DELETIONS option 1 – DELETE MONTHLY PAYMENTS. After calling details , if you elect to view the calendar, the program jumps not, as you would expect to menu8 from which it was called, but to menu6, because VIEW CALENDAR is another option of that menu.

If you do not wish to view the calendar, the routine calls delmonth to delete the entries and update to recalculate the pay day deduction, before returning to the CALENDAR DELETIONS menu.

```
11610 DEF PROC delocc
11615 LOCAL X: LOCAL A$: LOCAL F: LOCAL F$: LOCAL G$
11620 CLS : PRINT "Please enter the mo
       nth, first   three letters in ca
       pitals, in   which the payment i
       s made."
```

```
11625 PRINT : PRINT "If no more paymen
       ts to delete,  enter ""END""."
11630 POKE SVAR 618,8: INPUT "Month? -
       END if finished";A$
11635 IF A$="END" THEN GOTO endoccdel
11640 INPUT "Date?";D: findate
11645 CLS : PRINT "Please enter the am
       ount paid,   and the payee, exac
       tly as it    appears in the cale
       ndar."
11650 INPUT "Amount paid?";A
11655 INPUT "Payee? - as listed in cal
       endar";P$
11660 LET A$=STR$ A+"↑"+P$+"\"
11665 LET X=INSTR(6,G$,A$)
11670 IF X=0 THEN CLS : PRINT "THIS EN
       TRY DOES NOT APPEAR ON   THE DAT
       E GIVEN":presskey: GOTO 11620
11675 crossoff
11680 GOTO 11620
11685 LABEL endoccdel
11690 END PROC
```

This is the procedure which deletes single payments. Its construction is simple – it finds the date on which the payment was made, checks that the details you have given are there, and calls crossoff to delete it. If you have entered either the date or the payment details incorrectly, line 11670 reports that the payment does not appear and jumps back for you to re-enter it.

The procedure loops until you reply "END" to the prompt for a month, so that several single deletions may be made without returning to the menu. It would be very irritating if you were deleting quarterly payments and had to return to the menu and call the option again for each one.

```
6220 details
6222 IF Y$="Y" THEN GOTO menu6
6224 delocc
6226 update
6228 GOTO menu8
```

Our final routine gives option 2 of the CALENDAR DELETIONS menu, which works in the same way as option 1.

Next month, we shall come to the end of "MONEY MANAGER", and at last you will be able to make full use of the program. See you then.

ADVENTURE CORNER

By:- Paul Rigby.

This month, as well as our second adventure game review, the Corner introduces its first book review! In addition, this month sees the first part in a special, mini-series, where famous science fiction/fantasy writers give their opinions on the future of adventure games, role-playing games and the like. Writers such as these are an important link in the chain of computer game production as they are the inspiration to many programmers, directly or indirectly. All this - just for the loyal readers of FORMAT! Am I good to you or what, eh?

TITLE:- A BEGINNERS GUIDE
        TO ADVENTURES.
AUTHOR:- DAVE HAVARD
SUPPLIER:- ATLAS ADVENTURE SOFTWARE,
        67 LLOYD ST,
        LLANDUDNO,
        GWYNEDD,
        LL30 2YP.
PRICE:- £3.00 (overseas readers
        please add £1.00)

The A5 size Beginner's Guide, bound in a paper cover, is divided into 11 chapters and an appendix. The first two chapters cover themes and adventure types (such as text-only, icon driven, etc). Chapter three, the largest in the book, guides you through a sample adventure transcript (which includes pre-drawn maps). In this case a golden oldie - Artic's Golden Apple. Following a note-filled chapter on the Golden Apple and another chapter on saving and loading adventures the Guide discusses synonyms and includes a comprehensive sample list that'll prove a handy reference whilst playing any adventure. Chapter seven continues the verb/noun input discussion whilst

chapter eight expands into a full sentence parser debate. Character interaction and a chat on mazes follow. Finally, a chapter aimed at experienced adventurers ends the book (describing the workings of adventures).

Although the author has produced a usable and friendly guide for beginners I still have a couple of criticisms. Firstly, the book is ridden with a number of appalling spelling mistakes.

Secondly, although the basics are included I don't think they are given enough space. I would have preferred the book to have dwelt on each point much longer, introducing multiple examples in case the beginner finds one, particular example hard to grasp.

Thirdly, I thought the design could have had more thought given to it. The introduction of the transcript of the Golden Apple appeared far too soon. There should have been a number of individual discussions on many more game elements. Once the reader had come to grips with each single component, then would be the time to lump them all together and introduce the transcript.

The Beginner's Guide is still a recommended buy, as it lumps together many hints and tips that players have had to collate from several publications and is, therefore, excellent value for money. However, an updated and improved second edition would be welcome.

=============
And now on to this months promised adventure game review.

GAME:- DOOMSDAY
SUPPLIER:- RELION SOFTWARE,
            6 RAWLINS AVE,
            WORLE,
            WESTON SUPER MARE,
            AVON, BS22 0FN.
(CHEQUE/PO   PAYABLE   TO   GRAHAM
BURTENSHAW)
FORMAT:- SPECTRUM 128K ONLY
PRICE:- £4.00

Doomsday is a disturbing adventure from Relion Software. Producing a 1984-type atmosphere, Doomsday will, I am sure, provoke reaction. The author, Graham Burtenshaw will either be praised for his, rather pessimistic, reflection of the fate of the human race and the Earth we live on or he will be called a sick man who's analyst should be placed on danger money.

The game design shows that a lot of effort has been expended by the author. Three stats boxes are placed along the top of the screen (status/score, a small graphic window and weight/cash). The text, and there's a fair amount, scrolls beneath. Utility commands are present. You can remove the status line and the "more" prompt (when more than one screen full of text appears - handy for typing in the solution - saves time), VOCAB gives you a full list, OOPs and abbreviations such as X for Examine make playing more enjoyable.

The aim of the game is to destroy the human race and thus give the Earth a chance to survive. All the trees have been destroyed, most of the wildlife is extinct, vivisection is rife and barbaric (you'll see disturbing descriptions of animals and babies used for experimentation), portions of the population are used for chemical experiments, etc.

The game engine, while ambitious on occasion, is frustrating at times. At one point you'll need to manoeuvre a character, room-by-room to a location to do a job for you. Trouble is, once he moves to one room he might just wander off somewhere else before you get a chance to give him further

orders. Which means you'll end up chasing this guy all over the place trying to keep him under control.

Other criticisms include: every time I tried to put a cat in a case it was dropped on the floor. Yet I could put a rat in the same case using the same command! An essential anti-theft device, hanging around your neck is never mentioned, a cage could not be opened until a certain character had come and gone giving a linear feel to the game, etc, etc.

Doomsday shows lots of promise. I would like to see more work from Relion, therefore. However, future designs must be tightened up prior to release. But what of Doomsday's subject matter? Brave or sickening? Write in and tell me what you think.

DISTANT VOICES

In its short life computer gaming has endured more rapid and thorough change than any other entertainment field. In addition to new tastes and technologies we constantly see new approaches to the display of information on the screen with more and more elaborate sound and graphics. Of course, computer games are not interactive movies any more than movies are screened plays, and it is likely that it will take about as long for software to separate itself from what has come before as it did for directors to stop turning their cameras on at the footlights and sitting back for two hours. The change will come, however - the evolution has already begun. Here, too there is a parallel to the evolution of cinema. Douglas Adams (author of Hitchhiker's Guide to the Galaxy, Dirk Gently series, etc),

"If you had shown a modern movie to someone a few decades ago, he would have been completely bewildered as to what was going on."

So what does the future hold? Harlan Ellison (author of The Glass Teat, Approaching Oblivion, Dangerous Visions, etc) considers that,

"Computer entertainment is an oxymoron." [Explanations to the word "oxymoron" on the back of a postcard, please]

Although others are rather more positive, Douglas Adams, "Games will increasingly become multimedia. Sound will become an important component. I would almost think more important than graphics [as an] imagination stimulus."

Although Alan Dean Foster (Spellsinger, Shadowkeep, etc) disagrees. He sees sophisticated graphics as the key to the future, "One of the great advantages you have with computer animation comes when you achieve a semblance of reality, because you can do all sorts of things a camera can't. Imagine seeing Bugs Bunny in 3D! With computer controlled, three-dimensional animated characters, you could put real people into [animated scenes], like the sequence from The Twilight Zone where the bad kid sends the girl into a cartoon world. One of these days you'll be able to buy something like an expanded version of a flight simulator, for the home, and you'll get your little piece of software and slam it into the simulator, and you'll be on Trichon IV or 20,000 Leagues Under the Sea with Captain Nemo, or whatever you want. The entire environment will be simulated for you: sight, smell, sound and everything else."

Thus ends our first foray into the world of speculation and wonder. Next month I'll be chatting to, amongst others, Isacc Asimov and Roger Zelazny.

Tune in next month for that plus more reviews and...ooh, other bits which I haven't quite decided on yet. Why not write to me, at the FORMAT address, either to tell me what you would like to see covered in future Adventure Corners or to give your own opinions on the adventure scene.

See ya soon!

YOUR LETTERS

Dear Editor,

After reading John Wases' excellent "RE-INKING" (FORMAT Vol.4 No.3), I contacted Caspel Computer Services and enquired about their new aerosol, which John mentioned at the end of his article. They said yes, they do have a new product called, of course, "Re-ink". For £12.95 inclusive, post free, you get (by return post) a 120ml (CFC free) can of re-inking solution, with simple instructions printed on the can. They also included a small catalogue of reasonably priced ribbons etc.

This is my first attempt at re-inking and the result is very good, although the ribbon seems to be slightly darker at the top. This could be because of the way in which the spray is applied and its fast drying, but is more likely due to my inexperience. I do not know how long each treatment will last, but from first impressions, depending of course on the condition of the ribbon and frequency of use this seems to be a very cheap way to extend ribbon life.

Caspell Computer Services are at Unit 2a, Sterte Road, Poole, Dorset BH15 2AF.

Thank you for your, and the many other contributors, hard work in making FORMAT the only publication worth reading.

    Yours sincerely, Robert Jones.

Oh come, come. Not the only publication worth reading surely. What about Playboy, Men Only and lets not forget my favourite - the Beano. **Ed.**

Dear Editor,

What amazing admissions you make in your reply to L.W.Simpson ('Your Letters', page 25 of the February issue of FORMAT)!

I am sure life would be so much easier for you if the membership number were given on all communications, but surely you protest too much when one of your customers makes such a small ommission. Are you not forgetting you are the Editor of a computing magazine?

In the first place, you seem to be living in the land of luxury in allowing 480 bytes per record. With just modest use of coding, the simple index you require could be easily accommodated in under 100 characters per record.

Carol Brooksbank or Nev Young could, I am sure, give you some tips on data compression if you approached them.

Your other admission that you have to wade through all 3000 entries record by record just to find one is equally ludicrous. You would be better off with 3000 postcards in an old shoe box!

One of the main attributes of a computer is its ability to sort and find data entries --- FAST. Any index program worthy of its name should permit the user to call up 'L.W. Simpson' and hit "NEXT" until right entry is retrieved.

Most members can thus be identified with just a few key strokes without the bother of first examining anything like 2000 records. Even those members with common names, like "J.Smith", can be traced within seconds.

I can only conclude that you must be using a very inefficient piece of software or wish to have a very, very, very, easy life.

    Yours sincerely, Jack Bettridge.

I think you misunderstand data base programs Jack. All programs are a trade off between features. Yes you could pack data but that means slowing down everything you do with that data. I can type in a name, or a post code, or anything else for that matter. But each record still has to be searched

31

in turn one after the other.

If all records were in memory then life would be easy, a few seconds and hey-presto a record would appear, before your very eyes as they say. But there is no way I can store over 3000 records in memory and discs are the logical place to store the data. Life is made easy on the DISCiPLE, PLUS D or SAM Coupé because they allow you to read and write sectors direct from the disc. Yes 480 bytes is over the top for most records but less would be cramped for some, hence the use of the full 512 byte sector to store each record (the other 32 bytes are used to store system information about when and how records are updated).

There is no limit to the number of discs that make up a data base in the system I use. Given a membership number the disc; side; track; and sector is calculated and the record read into memory for display or processing. Without the membership number you start at record number one and read each in turn until a match is found. Sometimes that is early on, sometime you need to read most of the database before you find the right one.

And yes, like most people, I do like to have an easy life sometimes. And if everyone quotes their membership number life is simple, and everything runs just that little bit better for EVERYONE. For someone to keep a note of one number is not too much to expect - is it? Ed.

Dear Editor,

Firstly, thank you for an excellent magazine. Secondly, I would like to thank Carol Brooksbank her SAM program, 'MONEY MANAGER'. It has taught me a lot about SAM programming but especially about using SOUND. I could not play a note until I read her break down - now all is clear (well nearly!)

One point I would like to pass on to other would-be musicians. The manuals do not make this clear but you read 5 SOUND commands before you can produce your first note (tone).

You have to Set OCTAVE with bits 16; 17; 18, VOLUME with 0-5, the actual NOTE (TONE) with 8-13, Turn frequency generator on with bit 20, and finally turn the chip on by setting bit 28.

This info is cunningly concealed in the tech manual, but I for one could'nt find it without Carol's help!

Now a quick query. Do the envelope generators work on all the frequency generators, or just specific ones? If so which ones?

Yours sincerely, P.Rushton.

The sound chip on SAM is beyond me. I type BEEP .5,1 and it makes a noise, after that I'm lost. Anyone out there with an answer?. Ed.

Dear Editor,

I enclose my subscription for another year of FORMAT, but would like to make a few further comments.

Firstly - HELP! I am desparate for details on the DISCiPLE's disc controller or to be specific - how to load an entire track in single density. I can read tracks on the SAM because it supplies the controller documentation but the DISCiPLE manual only gives the ports to use.

Could you give more details about dragon tiles - an impartial review perhaps? Keep up the good work.

Yours sincerely, Thomas Quillin.

The DISCiPLE's disc controller is the 1772, the same as SAM's so any data you have will apply.

Alas there is a bug in the 1772 that causes the chip to screw up on a full track load, still you can play with all the other features.

On the subject of Dragon Tiles, I realy can't commision a review of one of my own products can I? But if anyone sends one in I may decide to print it. Ed.

Dear Editor,

I am writing to you because I have two problems to see if you can help.

First I am trying to make this computer game and I have got one massive problem, I have drawn out a person on graph paper (a WWF wrestler to be precise) and I can't work out for the life of me how to put him on the screen and make him move sort of

life like.

Second major problem. In the last two months I have changed over to a SAM Coupé and I would like to get to know someone or some people that owns a Sam and would like to get together and do some programming. I live in North Yorkshire, why can't you set up a page of two for the ones that would like to team up with somone please please help.

Yours sincerely, J.M.Howells

Your first question requires an answer that is a bit beyond the realms of the letters page, however keep reading FORMAT - there is something coming.

Second point. We do have a contact page, its the Small Ads column which appears most months. Use this to advertise your address or phone number and you will soon find contacts. Ed.

Dear Editor,

First thank you for your mag, it meets the three I's of all good mags, Interesting, Instructional and Informative. I have been a computer user for years, I started with a 16K rubber keyboard Spectrum, moved on to a Spectrum +, then a Spectrum + 2, I now have a Sam, I've had it since Dec 89, and I'm very happy with it. In fact I purchased another one for my nephew last Christmas. The speed and versatility of Sams basic is amazing, I have to add pauses to slow them down.

Now a tip for Sam basic programmers, if you Enter PRIN instead of PRINT you get a 'Missing DEF PROC' error, the best way to get over this problem is when you are entering programs use lower case, only using caps in "PrInT" lines. Good old Sam will turn keywords into CAPS for you.

I'd also like to thank Carol Brookbank for the Money Manager program, and would like to suggest a minor alteration:-

In line 695 IF opt=0 THEN LET w$="": GOTO menu 2
line 785 IF opt=0 THEN LET w$="": GOTO menu
line 11090 PUT 56,175,w$: LET

togflag=0: LET w$=""

The change is LET w$="" (note no space). By clearing the w$ string you can toggle with insert on off.

I have found another fault in the Sam,well not actually a fault, more a caution to pass on to other users. Carol uses reverse oblique as a control character, this is on the (shift INV key) unfortunately I pressed (symbol INV key) first nothing happened or so I thought, so I pressed (shift INV key) and got the reverse oblique printed up as I expected. On running the program I got a 'Subscript wrong' error when I tried to print the calendar. It took me some time to find this error as it lists to screen and printer correctly. I only found this error of mine when I decided to change the control characters and found the oblique would not delete on first try.

Yours sincerely, Iain Smith.

Carol is getting a lot of well deserved praise for Money Manager. The series works as both a basic tutorial and in producing a very useful program.

I'm sure readers will find you sugestions and cautions worth while. Ed.

* - * - * - * - * - *

Letters may be shortened or edited to fit on these pages.

This is YOUR letters page so it is up to you, our readers, to fill it. Send your letters to the usual address and mark the envelope LETTERS in the top left-hand corner. Keep your letters as short as you can so we can fit in as many as possible.

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NEW MESSAGES EVERY WEEK!

NEV'S
HELP PAGE

By:- Nev Young.

Yet another month has flown by and once more I have started getting urgent phone calls from a certain editor to see if there is to be a Help Page this month or not.

As usual I start by sorting the Help Page letters into three piles Sam, Spectrum and printers. I hate the printer ones because there is normally so little that can be done without the printer manual and even then its not too easy. I shall begin with some queries from Spectrum users.

S.Fletcher of Birminham has got hold of a Saga Emperor keyboard but finds that many of the extra keys do not work correctly. : gives COPY, = becomes LET or L, * gives B or BORDER. As you know on an old rubber keyboard Spectrum (fondly known as the "dead flesh" machine) to get these charcaters you need to press and hold the symbol shift key at the same time as another key to get the desired character. The Spectrum + and later the 128K models have extra keys which work by having two switches beneath the keys to do that for you. The Saga works in the same way and what you are getting is the key press without the symbol shift.

If you can get the correct character by holding the symbol shift key at the same time then it would point to a broken wire or the like on the Emperor. Trying to get an old Spectrum will not alter your problem as the Spectrum + and the rubber keyed Spectrum were the same machine. Only the keyboard was changed.

W.Marsden of St Helens writes "Is there any way I can connect my Spectrum+ to a VDU Type SANYO BM-12ESN instead of using a TV". I know nothing about the VDU you mention but in general VDUs will not work with a

Spectrum. The reasons are many but the prime ones are: The number of lines on the VDU would have to be 625 to match the Spectrum. You would need an RGB input on the monitor and also on the Spectrum. These signals can be pulled off the edge connector but only the 128K models have a proper RGB output signal.

Clem Birkenshaw of Leeds thinks he needs a DISCiPLE to let his friend share his data files. Not so the data files of both the DISCiPLE and PLUS D are the same so either one can use the others files. The only time you have any problem is with some of the older software that needs different versions for the two interfaces. The PLUS D is readily available from Datel Electronics.

A rather pleasant letter from Roy Burford included the question "Can ROM routines only be called from machine code or is there a way to do it from basic?" There is indeed Roy, to call the routine you are interested in at 3438 (0D6EH) you would just do RANDOMIZE USR 3438. Which is the normal way of calling any piece of machine code from basic.

A few months ago I passed on a plea for help with the OCP Finance manage package from Mr Baumann. I have had two replies one from Francis Miles who is in the middle of a rewrite of the package and from John Haynes who has an original version and manual for the PLUS D which he is prepared to part with. I will pass on any correspondence.

Some people are finding that one disc drive isn't enough and they want to fit a second drive. But how they ask. There are three things that need to be done.

1. Split the ribbon cable. The second drive is fitted in parallel so there is no need to cross any wires.

2. Set the second drive to address 2. There is normally a 4 way switch or jumper package near to the ribbon cable connector.

3. Configure the system file. There is no need to go through the setup program again just POKE @2,X where X = 80 or 40 for the number of tracks and add a further 128 if the drive is double sided. Then save the new system file and away you go.

Leslie Pollard uses the Betterbytes utilities Disc Manager and Organiser but has found that they both "mess about with the DISCiPLE ROM in some way". Now when ever a disc is CATted the catalogue begins with the disc number of the disc that the system was booted with. "Whats happening".

The "messing about" does a few things like testing if the interface is a DISCiPLE or PLUS D and also it makes changes to the heading of the CAT. When the system file is saved back to the disc the new CAT heading is saved with it. This is how the disks are numbered. When you CAT from within the program the system file is loaded and so the current disc number is printed. But if you just CAT the disc yourself then the heading of the last system file loaded is used. No way round that one I'm afraid but at least now you know whats happening.

Your query about IBU does show a misunderstanding. The program has the same effect as FORMAT d1 TO 2, only faster and it works on single drives.

Jack Juursema from Hoorn has got the old problem of badly fitting edge connectors. I don't think there is anything new to be said about this but if you have tried cleaning with a hard rubber or with alcohol then perhaps you should consider running a soldering iron over the pads to recoat then with tin (assuming that you know how to solder that is).

And now we turn to a few problems from SAM users.

Harold Burton of Edinburgh would like a short machine code routine to output a character to the parallel port on the Sam. The following should work.

Enter with character in the A register

      PUSH BC
      CALL 385
      POP BC
      RET

At address 385 (0181H) is the JSENDA routine in the ROM.

Some machine code misunderstanding by Tony Jeenes of Malvern. He writes "I thought then when the EXX instruction was used any code or address would be sacrosant until the next EXX. But as the enclosed program shows they are not." I won't copy out the program but needless to say it calls the Sam ROM. You were half right an EXX does save all the registers until the next EXX but the Sam ROM has many EXX codes itself. Therefore you can not use this to keep registers you will have to put them onto the machine stack and pop them back after.

Two people have written with regard to the use of SCART on their Sams. Both have the problem of lack of vertical hold causing the picture to roll. I have only been able to get hold of one TV with a SCART to test and sure enough on turning on the picture rolls. However It wasn't the Sam at fault. The TV I was using had a SCART switch so even though the picture was coming via the SCART the TV was not fully switched. Pressing the button on that TV (which was hidden away behind a panel) locked the picture perfectly. A look around my local shops showed that nearly all of the TVs available had a button, switch or something that needed to be pushed. I should check the TV out very carfully.

Another problem that I was told about when using the SCART to drive a digital RGB monitor is a problem of a completly blank screen. This is caused by a bad choice of pen and paper colours, which, when only 16 are available via the RGB can cause both to appear the same on screen.

More machine code on the Sam, V.Taylor writes "would it be possible to use a Spectrum dissembler to convert a program to hex and then use a Sam assembler to convert the hex listings to use them on the SAM". Well yes but you don't need to do that the Sam will read both Spectrum tapes and PLUS D discs and load the machine code files directly without the need for any conversion. This is because both machines use the same CPU chip. The only time you can not do this is when addresses need to change or calls are made to the Spectrum ROM which, of course, is not there an Sam.

L.Simpson has sent in a catalogue of problems for me to wade through including "What has happened to screen lines 20 - 22" , "How can I access printer commands like underline, italics etc" and "can you give precise details of the use of DEF PROC".

I will try. The Sam at switch on has a character set that is 8 pixels wide and 9 pixels deep. The Spectrum's are 8x8 the extra line in depth means that fewer lines of text can be held on the Sam screen. But you can change the size back to 8x8 by using the command CSIZE 8,8. You will then have 22 lines of text just like the Spectrum.

To access the printer functions you want you will first have to put the printer channel into binary mode to allow you to send control characters. This is done by CLOSE#3: OPEN#3,"B". Now you can send the control sequences shown in your printer manual but remember you have to LPRINT CHR$10 to get a line feed in this mode. To switch back into text mode repeat the above but use "P" in the second command.

DEF PROC is probably the most powerful command on the Sam. Its uses are many and varied. In its simplest form you can use it like a GOSUB routine except you do not need to say GOSUB you just use the procedure name. Procedures can also have parameters passed just like other commands, CSIZE 8,8 was an example. I couldn't possibly explain all the things you can do with procedures in the help page. I think the best way to find out what can be done is to read through some of the Sam listings that appear in FORMAT and also try some of your own.

If you are really serious then pop down to your local college and see if you can enrol onto a software engineering course (NOT engineering software, Thats very different). They will probably teach you to write in PASCAL which uses procedures and so will let you learn what they are for and how to use them.

That's all I can fit in this month, but keep those problems coming. Please remember, I can only answer questions through this column. Make sure you include FULL details. If your problem is with software it is best to send a copy (on disc if possible) and enclose a SAE for its return.

Write to me at:-

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England.

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